

REMARKS/ARGUMENTS

After the foregoing Amendment, claims 1-21 and 23-25 are currently pending in this application. Claims 1, 10, 24 have been amended and new claim 25 has been added to more distinctly claim subject matter which the Applicants regard as the invention. Applicants submit that no new matter has been introduced into the application by these amendments.

Telephonic Interview

The Examiner is thanked for granting a telephonic interview with the Applicants' representative on April 29, 2008.

During the interview, the Supervisory Examiner indicated adding claim language regarding the height of the wedge with respect to the implant body would likely overcome Barber. Accordingly, claim 1 has been amended to state "the front end is wedge shaped and includes top and bottom inclined wedge surfaces and extends to a full height of the implant at least in the first position".

The Supervisory Examiner also indicated modifying claim 24 to positively recite how the clamping screw is connected to and interacts with the hollow body would likely overcome the rejection. Accordingly, claim 24 has been amended to describe how the clamping screw is attached to the implant.

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During the interview, the Examiner indicated modifying claim 10 to further describe the nature of the screw would likely overcome the rejection. Accordingly, claim 10 has been amended to further describe this screw.

Claim Objections

The Examiner objected to claim 17 because claim 17 recited “a device”, but should have recited “the device”. Claim 17 has been amended, as suggested by the Examiner. Withdrawal of the objection to the claim 17 is therefore respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1-8, 17, 18-21, 23, and 24 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 5,236,460 to Barber in view of U.S. 4,349,921 to Kuntz. Applicant respectfully traverses this rejection.

Claim 1 is directed to an implant used in procedures for stiffening the vertebral column. The implant comprises an enclosed hollow body which includes at least a movable open interior receptacle and a movable open exterior receptacle. These receptacles are oriented toward one another, and interlock, and are movable from a first position to a second, spread apart position by inserting a filling material or by utilizing a filling material made of an elastomer in order to expand the hollow

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body. The implant is bean shaped and has a front end and a rear end. The front end is wedge shaped and includes top and bottom inclined wedge surfaces. The front end extends to a full height of the implant at least in the first position. The front end is insertable into a vertebral disc space. Also, the rear end comprises an implantation instrument attachment and is adapted for connection to a device used to generate a filling pressure. In addition, one of the receptacles fits within the other of the receptacles when the receptacles are in the first position.

Barber teaches an implant device with front and rear ends. The Barber implant device has pins 21, 31, 33, 37 that project perpendicularly from the receptacles surfaces. Pins 31, 33 project upwardly from the outer surface of the top receptacle, and pins 21, 37 project downwardly from the outer surface of the bottom receptacle.

As the Office Action admits, Barber fails to teach or suggest the implant device has front end with a wedge shape. The Office Action alleges it would have been obvious to a person of ordinary skill in the art to modify the pinned implant device of Barber with a wedge-shaped end to “facilitate insertion” into the space between two adjacent vertebrae. However, there is no motivation to modify the Barber implant with a wedge-shaped end. A person of ordinary skill in the art would not be motivated to modify Barber with a wedge-shaped end because, upon attempting to slide the Barber device between vertebrae, the pins 21, 31, 33, 37

would all abut or catch against vertebrae and hinder further insertion. Even if the front-most pins 21, 31 somehow managed to not prevent the device from initially being slipped into the space between two adjacent vertebrae, certainly the larger pins 33, 37 would jam against the vertebrae and prevent any further insertion. To insert the Barber device, the vertebrae must first be separated and then the implant must be placed into the space. There is no motivation to modify Barber by making the Barber device's front end wedge shaped by including top and bottom inclined wedge surfaces, such that the front end extends to a full height of the implant at least in the first position to facilitate insertion. If a wedge shaped front end were provided on Barber that extended to the full height of the pins, the intended engagement of the pins would be ineffective due to the wedge, making Barber unsuitable for its intended usage.

Claim 24 depends from claim 1 and further recites “a clamping screw attached to the rear end”. Barber does not teach a “clamping screw”. The Office Action points to element 61, however element 61 is a handle that a surgeon rotates to rupture the resin packet and inject the resin, not a “clamping screw”.

Claims 2-8, 17, 18-21, 23, and 24 are dependent upon claim 1, and accordingly Applicants believe these claims are allowable over the cited prior art of record for the same reasons provided above in connected with claim 1.

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Based on the arguments presented above, withdrawal of the 35 USC § 103 rejection of claims 1-8, 17, 18-21, 23, and 24 is respectfully requested.

Claims 9 and 10 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 5,236,460 to Barber in view of U.S. 4,349,921 to Kuntz, and further in view of U.S. 6,296,665 to Strnad. Applicants respectfully traverse this rejection.

Claims 9 and 10 are dependent upon claim 1, which the Applicants believe is allowable over the cited prior art of record for the reasons provided above. Strnad does not address the deficiencies of Barber noted above.

Claim 9 depends from claim 1 and further recites that the receptacles are adjustable relative to each other, whereby adjusting movement is limited to a certain area, which ensures a mutual overlapping of the receptacles.

Claim 10 depends from claim 9 and further recites that the adjusting movement between the receptacles is limited through a tightening screw in one of the receptacles catching in a slit in the other of the receptacles.

The Office Action admits neither Barber nor Kuntz teach this limitation, but alleges it would have been obvious to one of ordinary skill in the art to provide the pin of Strnad in this arrangement because a pin and screw are equivalent. However, a pin and a screw are not equivalent due to the sliding action of the pin provided by Strnad, as compared to the clamping action required for the screw of the present claim.

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Based on the arguments presented above, withdrawal of the 35 USC § 103 rejection of claims 9 and 10 is respectfully requested.

Claims 1 and 11-14 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 5,236,460 to Barber in view of U.S. 4,349,921 to Kuntz, and further in view of U.S. 5,236,460 to Ferree. Applicant respectfully traverses this rejection.

Claim 1 is allowable over the cited prior art of record for the same reasons provided above. Ferree discloses an elastomer filled implant. This does not remedy the deficiencies of Barber or Kuntz noted above. Claims 11-14 are dependent upon claim 1, and Applicants believe that these claims are allowable over the cited prior art of record for the same reasons provided above in connection with claim 1.

Based on the arguments presented above, withdrawal of the 35 USC § 103 rejection of claims 1 and 11-14 is respectfully requested.

Claims 15 and 16 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. 5,236,460 to Barber in view of U.S. 4,349,921 to Kuntz, and U.S. 5,236,460 to Ferree, and further in view of U.S. 4,517,844 to Powell. Applicant respectfully traverses this rejection.

Claims 15-16 are dependent upon claim 1, and Applicants believe that these claims are allowable over the cited prior art of record for the same reasons provided above in connection with claim 1. Powell is only cited as disclosing an air bubble in

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a system that is used for elasticity. This does not address the deficiencies of Barber or Kuntz noted above.

Based on the arguments presented above, withdrawal of the 35 USC § 103 rejection of claims 15-16 is respectfully requested.

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-21 and 23-25, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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